Please amend the application as follows:

In the specification:

Replace the present title, found at the top of page 1, with:

A1 SCINTILLATION PROXIMITY ASSAY FOR THE DETECTION OF PEPTIDOGLYCAN SYNTHESIS

On page 1, immediately before the paragraph beginning on line 5, insert the heading:

A2 **Background of the Invention**

On page 2, delete the paragraph running from line 17 through line 25 and replace it with:

A2 In the third stage, at the exterior of the cytoplasmic membrane, polymerisation of the glycan occurs. The disaccharide-pentapeptide unit is transferred from the lipid carrier to an existing disaccharide unit or polymer by a peptidogycan transglycosylase (also referred to as a peptidoglycan polymerase) (hereafter referred to as "the transglycosylase"). The joining of the peptide bridge is catalyzed by peptidoglycan transpeptidase (hereafter referred to as "the transpeptidase"). Both enzyme activities, which are essential, reside in the same molecule, the penicillin-binding proteins (or PBPs), as in PBP 1a or 1b in *Escherichia coli*. These are the products of the ponA and ponB genes respectively, in *Escherichia coli*.

On page 3, immediately before the paragraph beginning on line 27, insert the heading:

Brief Summary of the Invention

A4

On page 4, immediately before the paragraph beginning on line 12, insert the following section:

Brief Description of the Drawings

A5

Figure 1 is a graph showing the counts per minute (cpm) versus time based on the readings taken from the 100% controls.

Figure 2 is a graph showing the percentage inhibition of translocase (and thus peptidoglycan synthesis) versus Tunicamycin concentration.

Figure 3 is a graph showing the percentage inhibition of transglycosylase (and thus peptidoglycan synthesis) versus Vancomycin concentration.

Figure 4 is a graph showing the percentage inhibition of transglycosylase (and thus peptidoglycan synthesis) versus Moenomycin concentration.

Figure 5 is a graph showing the percentage inhibition of transpeptidase (and thus peptidoglycan synthesis) versus Penicillin G concentration.

Figure 6 is a graph showing the percentage inhibition of transpeptidase (and thus peptidoglycan synthesis) versus Ampicillin concentration.

A5 cont'd

Figure 7 is a graph showing the percentage inhibition of transpeptidase (and thus peptidoglycan synthesis) versus Cephaloridine concentration.

Figure 8 is a graph showing the percentage inhibition of lipid pyrophosphorylase (and thus peptidoglycan synthesis) versus Bacitracin concentration.

On page 4, immediately after the "Brief Description of the Drawings" section inserted above and immediately before the paragraph beginning on line 12 of the application as originally filed, insert the heading:

A6

Detailed Description of the Invention:

On page 9, delete the second through ninth paragraphs, i.e., lines 4 through 26 of the application as originally filed.

In the claims:

Cancel claim 1. Replace claims 2-9 with the amended versions set forth below.

2. (amended) An assay for detecting peptidoglycan synthesis, which comprises the steps of:

(1) incubating a reaction mixture comprising in aqueous medium a uridine(5'-)diphosphate (UDP)-*N*-acetylmuramylpentapeptide, radiolabelled UDP-*N*-acetyl glucosamine, a source of divalent metal ions, a source of undecaprenyl phosphate, a source of peptidoglycan, a source of translocase enzyme, a source of transferase enzyme, as source of transglycosylase enzyme, a source of transpeptidase enzyme and a source of lipid pyrophosphorylase enzyme, under conditions suitable for peptidoglycan synthesis;

(2) adding a divalent metal ion chelator compound to the reaction mixture of step (1);

(3) adding lectin-coated beads impregnated with a fluorescer to the reaction mixture of step (2); and

(4) measuring light energy emitted by the fluorescer.

3. (amended) The assay according to claim 2, wherein the UDP-*N*-acetylmuramylpentapeptide is UDP-Mur*N*Ac-L-alanine-γ-D-glutamic acid-m-diaminopimelic acid-D-alanine-D-alanine.

4. (amended) The assay according to claim 2 or claim 3, wherein bacterial cell membranes represent a source of one or more of undecaprenyl phosphate, peptidoglycan, translocase enzyme, transferase enzyme, transglycosylase enzyme, transpeptidase enzyme and lipid pyrophosphorylase enzyme.

5. (amended) The assay according to claim 4, wherein the bacterial cell membranes are from *Escherichia coli*.

6. (amended) The assay according to claim 2, wherein the reaction mixture of step (1) further comprises a test compound.

7. (amended) The assay according to claim 6, wherein the test compound is an antagonist of one of the enzymes.

8. (amended) The assay according to claim 2, wherein ethylenediaminetetraacetic acid is used as the divalent metal ion chelator compound in step (2).

9. (amended) The assay according to claim 2, wherein the lectin-coated beads comprise wheat germ agglutinin.